REMARKS/ARGUMENTS

The Final Office Action mailed August 5, 2009 has been received and the Examiner's comments carefully reviewed. Claims 1-24 are rejected. Claims 1, 5, 6, 8, 9, 11, 13 and 17-19 have been amended. The Applicants present the following for consideration.

Claim Rejections Under 35 U.S.C. 112

In response to the 35 U.S.C 112 rejections, the claims have been amended to address the rejections. The applicants respectfully request the rejections be withdrawn.

Claim Rejections Under 35 U.S.C. 103(a)

Claim(s) 1-3, and 5-24 are rejected under 35 U.S.C. 103(a) as being unpatentable over Forecast et al. "Dynamic Modeling for Resource Allocation in a File Server", U.S. Patent No. 6,230,200, hereafter referred to as Forecast, in view of Ballard "Client-Side Load-Balancing in Client Server Network", U.S. Patent No. 6,078,960, hereafter referred to as Ballard.

As amended, Claim 1 recites in part "determining by the server component if allocating to the client the additional buffer memory on the server puts the server component in a resource constrained situation, wherein the server component is determined to be in a resource constrained situation by comparing a total number of transactions currently in use for all connections to the server and a total number of transactions that are currently pending on the clients for all connections to the server with a maximum number of transactions available on the server." Among other differences, the cited references do not teach determining when a server is resource constrained by comparing a total number of transactions that are in use to a total number of transactions that are not in use yet but are pending on the client.

In contrast, Ballard teaches that "load balancing is achieved by specifying a maximum frequency of requests (e.g., xx requests/minute) at which a server can be accessed" (lines 60-62). Specifying a maximum frequency is not the same as determining how many requests all of the clients have pending but are not currently in process by the server. Instead, this is merely a limit put on the load balancing algorithm. In Ballard's method, the client would never exceed the maximum frequency of requests. Further, there is no determination that the server is resource constrained. The maximum number is merely a desired limit. Additionally, nowhere do the

cited references teach comparing current transactions on the server to pending transactions that are on the client and haven't yet been issued to the server. The addition of the Forecast reference fails to cure these deficiencies. Forecast is directed at modeling certain resources and the effect of failure of those resources. Forecast teaches determining an imbalance condition and observes that this may arise when "an amount of resources substantially large" is allocated. Forecast does not, however, compare a total number of transactions in use on the server with a total number of pending requests on the clients for all connections to the server. The cited references do not teach even sending a pending requests count to a server. Since the cited references fail to teach determining the resource constraint as recited, Claim 1 is proposed to be allowable. Claims 2-11 are proposed to be allowable as they depend from a valid base claim.

As amended, Claim 13 recites in part "receiving a transaction request message on the server computing device from the client; wherein the transaction request message received from the client includes the number of transactions that are pending on the client due to an unavailability of sufficient resources to handle the transactions that was previously negotiated; wherein the transactions that are pending on the client have not been sent to the server, wherein the number of resources available to the client that are stored in the credit limit field is a maximum number of transactions available to the client that is initially determined when the client connects to the server at which point a negotiation is performed between the client and the server to establish the maximum number of transactions; and wherein the server rebalances resources when the transaction request places the server in a resource constrained situation as determined in part by a number of transactions that are pending on the clients." For at least the reasons presented above, Claim 13 is proposed to be allowable. Claims 14-17 are proposed to be allowable as they depend from a valid base claim.

As amended, Claim 18 recites in part "receive information from a client that indicates the client needs additional buffer memory on the server to perform a transaction; wherein the information received from the client includes a number of transactions that are that are pending on the client but have not been sent to the server due to an unavailability of sufficient resources to handle; wherein the number of transactions was previously negotiated; and to rebalance resources currently allocated to the client; wherein the server issues messages to any affected

clients when the buffer memory on the server is rebalanced by the server; wherein the messages indicate to either reduce or increase each of the affected clients number of transactions, the messages comprising deltas specifying changes in the maximum number of transactions." For at least the reasons presented above, Claim 18 is proposed to be allowable.

As amended, Claim 19 recites in part "computing a total number of client connections, each client connection being associated with a client connected to a server, each client having a credit limit stored on the client and the server that identifies a number of resources that are allocated to the client; wherein the number of resources that are available to the client is initially determined when the client connects to the server at which point a negotiation is performed between the client and the server to the number of resources; wherein the client maintains information about the state of its allocated resources including a current number of outstanding credits used and a maximum number of credits available; computing a total number of pending requests on each client device that have not been issued to the server that identifies a number of transaction requests that are not being handled due to a limitation on resources." For at least the reasons presented above, Claim 19 is proposed to be allowable. Claims 20-24 are proposed to be allowable as they depend from a valid base claim

Conclusion

In view of the foregoing amendments and remarks, all pending claims are believed to be allowable and the application is in condition for allowance. Therefore, a Notice of Allowance is respectfully requested. Should the Examiner have any further issues regarding this application, the Examiner is requested to contact the undersigned attorney for the applicant at the telephone number provided below.

Respectfully submitted,

MERCHANT & GOULD P.C.

P.O. Box 2903
Minneapolis, MN 55402-0903
206.342.6200

/Timothy P. Sullivan/
Timothy P. Sullivan
Reg. No. 47,981
Direct Dial 206.342.6254

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